

IMU News 117: January 2023

A Bimonthly Email Newsletter from the International Mathematical Union

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1. EDITORIAL

This editorial is the first one that I write since taking office as IMU Secretary General on 1 January 2023.

I would like to take this opportunity to thank my predecessor Helge Holden for all his work, dedication and commitment to the IMU. I would also like to thank him for all his help during the transition period: we met in the IMU Secretariat in Berlin both before and after I took office, so that I feel prepared for my term to come.

The host institution of the IMU Secretariat is the Weierstrass Institute for Applied Analysis and Stochastics (WIAS) in Berlin, Germany. The permanent cooperation agreement between the IMU and WIAS provides the framework for the running of day-by-day operations of the IMU's permanent office. The operation of the Secretariat itself is supported by grants from the German Federal Ministry of Education and Research and the State of Berlin. I was happy to find well organized and functional premises and a very dedicated team.

I very much look forward to working and engaging with the IMU's new President Hiraku Nakajima, the new Executive Committee (EC), and our mathematical community. The months to come will be a busy period for the IMU as we prepare the next EC meeting in March, to be held—as usual for the first meeting of a newly elected EC—at the IMU Secretariat in Berlin. Many decisions taken at the meeting will help shape ICM 2026. In particular, we will decide on the composition of the Program Committee, chaired by Claire Voisin, as appointed by Hiraku. As you know, the structure of the Scientific Program is now under the responsibility of the ICM Structure Committee that decides, among others, on the number of plenary lectures, the sections and their precise definition, and the target number of talks in each section. The Program Committee will then select all the speakers and all panel members that make recommendations for speakers in the sections.

Building upon the experience of the virtual ICM 2022, one might ask how a “modern” ICM should look, keeping the benefits of in-person meetings, but also taking full advantage of what we learned from holding virtual events in recent years. The EC will be considering this very question for future ICMs, and we will also ask the Structure Committee for input. In addition, we must also consider how it might be possible to ease the organization of an ICM, allowing for more countries to make a bid.

Another crucial decision during the next EC meeting will be the use of the new IMU Reserve Fund, which was set up after the decision of the General Assembly in Helsinki 2022 to establish such a fund, with the help of donations from IMU members and other benefactors. Some of our members face problems paying their membership dues for various temporary reasons and we hope that the IMU Reserve Fund will be helpful here.

The IMU had to overcome extremely challenging obstacles during the last term, and some of the most difficult decisions in the recent history of the IMU had to be taken (see [IMU News 112](#)). When I was asked in September 2020 whether I would be willing to be the candidate for IMU Secretary General, I was honored but also surprised, as I had only limited experience with the IMU. When I accepted after some time and deliberation, I definitively did not see the full extent of the responsibility to come. Now, after having been an observer at the EC meetings in February and July 2022, I understand better, and I am ready for the challenge.

As Hiraku wrote in his September [editorial](#), the war in Ukraine casts a dark shadow over current international cooperation, and as Helge and Carlos wrote in their last [editorial](#), we do not know the events to come. Let us hope that the situation improves and that we all will be able to concentrate on what we like most: mathematics.

Berlin, 23 January 2023

[Christoph Sorger](#)
[IMU Secretary General](#)

2. NEWS FROM THE COMMISSION FOR DEVELOPING COUNTRIES (CDC)

New call of the IMU-CDC Graduate Assistantships in Developing Countries Program (GRAID). The program provides modest support for emerging research groups, working in a developing country listed as [Priority 1 or 2 of the IMU Definition](#), making it possible for them to fund their most talented students to study full-time and pursue a master's or PhD degree in mathematics.

We invite applications from teams consisting of a Principal Investigator plus his or her research group and an International Partner by April 15, 2023.

The Principal Investigator should be a university professor in mathematics holding a PhD, working at a university or research center in a developing country listed in Priority 1 or 2 of the IMU Definition, who is already training mathematics master's or PhD students and who is part of a research group. The International Partner should be a mathematician working at a university or research center not based in any

of the countries listed in Priority 1 or 2 of the IMU Definition. At the time of application, there should be an active and ongoing collaboration between the International Partner and the Principal Investigator.

This program is managed by the GRAID Subcommittee of the IMU and the [American Mathematical Society](#).

For more information please visit the [program's webpage](#).

Call for Donations to the GRAID Program. Funding for GRAID is provided by voluntary donations from mathematicians and mathematical institutions worldwide. IMU-CDC acknowledges and encourages donations to GRAID, which can be made via the [Friends of IMU website](#) or the [Centre International de Mathématiques Pures et Appliquées \(CIMPA\) website](#).

New call of the Breakout Graduate Fellowship Program of the IMU-CDC. Thanks to a generous donation by the winners of the Breakthrough Prizes in Mathematics—Ian Agol, Jean Bourgain, Simon Donaldson, Alex Eskin, Christopher Hacon, Martin Hairer, Maxim Kontsevich, Vincent Lafforgue, Jacob Lurie, James McKernan, Takuro Mochizuki, Daniel Spielman, Terence Tao and Richard Taylor—IMU with the assistance of [FIMU](#) is opening a new call of the [IMU Breakout Graduate Fellowship Program](#) to support postgraduate studies, in a developing country, leading to a PhD degree in the mathematical sciences. The IMU Breakout Graduate Fellowship Program offers a limited number of complete grants, with duration of up to four years, for excellent students from developing countries.

Professional mathematicians are invited to nominate highly motivated and mathematically talented students from developing countries who plan to complete a doctoral degree in a developing country, including their own home country. Nominees must have a consistently good academic record and must be seriously interested in pursuing a career of research and teaching in mathematics.

For a nomination to be eligible, the country of citizenship of the student, the country of residency and the country where the study will take place must be on the list of Developing Countries as defined by the IMU.

The 2023 call will be open from February 1 to May 31, 2023. For more information, visit the [program's webpage](#).

[Ludovic Rifford](#)

[Secretary for Policy of the CDC](#)

3. NEWS FROM THE COMMITTEE FOR WOMEN IN MATHEMATICS (CWM)

First meeting of the CWM 2023–2026. On January 26, 2023, the CWM met virtually to select the projects to be funded by CWM in 2023. The CWM funding call for 2023 received 48 applications, from several different countries and regions. Some of the selected projects aim at establishing or supporting networks for women in mathematics; others consist of research workshops geared towards establishing research networks for women. The complete list of selected projects can be found on the [news section of the CWM webpage](#).

The CWM committee members for the period 2023–2026 are the following:

- *Carolina Araujo, IMPA, Rio de Janeiro, Brazil, Chair*
- *Hélène Barcelo, MSRI, Berkeley, USA, Vice-chair*
- *U. K. Anandavardhanan, IIT Bombay, India*
- *Tony Ezome, USTM, Franceville, Gabon*
- *Catherine Greenhill, University of New South Wales, Sydney, Australia*
- *Motoko Kotani, Tohoku University, Sendai, Japan*
- *Matilde Lalín, Université de Montréal, Canada*
- *Selma Negzaoui, University of Monastir, Tunisia*
- *Ekin Ozman, Boğaziçi University, Istanbul, Turkey*
- *Carola-Bibiane Schönlieb, University of Cambridge, UK*

SCGES Hybrid Webinar: How to evaluate and reduce the Gender Gap in Science? On February 14, 2023, the [Standing Committee for Gender Equality in Science](#) (SCGES) is hosting the hybrid Webinar: *How to evaluate and reduce the Gender Gap in Science?* This will be an opportunity to reflect and to follow up on the results and outcomes of the [Gender Gap in Science Project](#), and learn about alternative approaches to reduce the gender gap in science. This event will be held in hybrid format (in-person and online), and will be part of the [Global Women's Breakfast](#). More information and the registration form can be found on the [SCGES webpage](#).

SCGES was established in September 2020, with the IMU and ICIAM, the [International Council for Industrial and Applied Mathematics](#), among its founding members. Since 2022, the monthly [SCGES Webinar Series](#) has highlighted various topics of interest around the focus tasks of the committee.

[Carolina Araujo and Hélène Barcelo](#)

Chair and Vice-Chair of the IMU [Committee for Women in Mathematics](#)

4. NEWS FROM THE INTERNATIONAL DAY OF MATHEMATICS (IDM)

Spread the news. The IDM Governing Board needs your help to spread the news of IDM in national and local school networks and increase the number of schools celebrating the IDM, either in the classroom, or through a larger event. For that purpose, [material for classroom activities](#) is available. Invitations to the school networks of your country can be made using invitation letters in the following languages: [Arabic](#), [Chinese \(simplified\)](#), [Chinese \(traditional\)](#), [English](#), [French](#), [German](#), [Korean](#), [Portuguese](#), [Spanish](#) and [Turkish](#).

If you wish to produce a letter in your own language, please [write to us](#) to ask for a template.

Celebration of March 14. This virtual celebration will highlight nine short lectures (10-15 minutes), either in English or with English subtitles. It will be played live at 14:00 UTC.

- The first part will consist of lectures by the four 2022 Fields medalists:
 - Hugo Duminil-Copin (in French)
 - June Huh (in Korean)
 - James Maynard (in English)

- Maryna Viazovska (in English)
- The second part will consist of five diverse lectures:
 - Joana Latas (in Portuguese)
 - Raïssa Malu (in French)
 - Erika Roldan (in Spanish)
 - Mayada Shahadah (in Arabic)
 - Ruhao Wu (in Mandarin)

The 2023 Mathematics for Everyone Challenge. This global challenge—a joint creative activity for all to participate—based on the format comic/cartoon will be announced soon. [Register to receive the IDM Newsletter](#) with related announcements.

Live coverage. A live coverage will take place on the [IDM website](#) and on social media on March 14.

Suggestions of activities. Visit the activity page for [suggestions of activities](#). A math in the street activity is still to come.

[Christiane Rousseau](#)

Chair of the [IDM Governing Board](#)

5. YURI MANIN (1937–2023)

The IMU mourns the passing of [Yuri Manin](#), who died on 7 January 2023, at the age of 85. Yuri Ivanovich Manin was born on 16 February 1937 in Simferopol, Crimea. He graduated from Lomonosov Moscow State University in 1958, received his doctorate and habilitation from the Steklov Institute of Mathematics in Moscow in 1960 and 1963. He was Principal Researcher at the Steklov Institute until 1992. He then spent a year at MIT and then became a director at the Max Planck Institute for Mathematics in 1993, where he remained until 2005, when he became Director Emeritus.

Manin's contributions to mathematics cover a wide range of topics in algebraic geometry, number theory and mathematical physics. He was awarded a number of prizes, including the Lenin Prize for Science (1967), the Brouwer Gold Medal (1987), the Nemmers Prize (1994), the Schock Prize in Mathematics (1999), the Faisal Prize in Mathematics (2002), the Cantor Medal (2002) and the Bolyai Prize (2010). He was a member of nine academies of sciences and an Honorary Member of the London Mathematical Society. He held honorary degrees from Sorbonne and from the Universities of Oslo and Warwick.

Manin chaired IMU's Fields Medal Committee for ICM 1998 and IMU's Program Committee for ICM 2002.

6. ILLUSTRATING THE IMPACT OF THE MATHEMATICAL SCIENCES

The US National Academies of Sciences, Engineering, and Medicine have made available some posters and other media illustrating how current mathematical research, both pure and applied, is paving the way for

major scientific, engineering, and technological breakthroughs. The material is suitable for display in classrooms and mathematics departments.

Readers are encouraged to visit the [project's website](#).

7. SUBSCRIBING TO IMU NEWS

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More details about IMU News can be found at www.mathunion.org/organization/imu-news
